

**REMARKS**

Claim 14 is amended. Claims 1-8 are cancelled. Claims 14-44 and 59 are pending in the application.

Claims 1 and 3-8 stand rejected under 35 U.S.C. § 112, first paragraph, for lack of enablement. The Examiner indicates that the recited change in shade is unclear and that the specification does not enable changing a shade utilizing a gas. Without admission as to the propriety of the Examiner's comments, claims 1-8 are cancelled.

Claims 14-34 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention. The Examiner indicates at page 3 of the present Action that it is unclear as to how the "depth profiling" recited in claim 14 is possible if portions are taken from the same surface of a composition. Without admission as to the propriety of the Examiner's rejection, claim 14 is amended to recite a first portion at a first depth of the composition and a second portion at a second depth of the composition. Accordingly, applicant respectfully requests withdrawal of the § 112 rejection of claim 14, and dependent claims 15-34 in the Examiner's next action.

Claims 1-8 stand rejected either as being anticipated by Pavate, U.S. Patent No. 6,001,227 or as being obvious over Pavate, individually or as combined with one or both of Woodward, U.S. Patent No. 5,494,743 and Dewey, U.S. Patent No. 3,674,926. As indicated above, without admission as to the propriety of any of the Examiner's rejections, claims 1-8 are cancelled.

Claims 14-34 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over various cited combinations of Pavate; Meisburger, U.S. Patent No. 5,502,306; Woodward

and "International Advanced Materials" (IAM webpage material). The Examiner is reminded by direction to MPEP § 2143 that a proper obviousness rejection has the following three requirements: 1) there must be some suggestion or motivation to modify or combine reference teachings; 2) there must be a reasonable expectation of success; and 3) the combined references must teach or suggest all of the claim limitations. Each of these three factors must be shown in order to establish a *prima facie* case of obviousness, the burden of which is upon the Examiner. Each of claims 14-34 are allowable over the various cited combinations of Pavate, Meisburger, Woodward and IAM for at least the reason that a *prima facie* case has not been established for any of these claims.

Independent claim 14 recites forming a first solution comprising a dispersion of undissolved material from a first portion at a first depth of the composition, forming a second solution comprising a dispersion of undissolved material from a second portion at a second depth of the composition and depth profiling of the composition by comparing information generated from the first and second portions of the composition. None of the cited reference, individually or as combined teach or suggest the claim 14 recited depth profiling.

The Examiner acknowledges at page 7 of the present Action that the references do not disclose the recited depth profiling. However, the Examiner indicates that it would be obvious to do so "because the homogeneity of the sputtering target is one of their quality parameters". Applicant notes that claims 14-34 are methods claims and that not one of the references, nor any of the cited combinations of references, taken together with the Examiner's indication that homogeneity is a quality parameter, suggests the recited method of generating information about materials present in a composition. Regardless of whether

or not homogeneity of the sputtering target is a quality parameter as indicated by the Examiner, it is not clear as to how the importance of homogeneity contributes towards suggesting the specifically recited method comprising depth profiling. Further, the cited combinations of references fail to provide a basis for a reasonable expectation of success of the method recited in claim 14. Accordingly, a *prima facie* case of obviousness has not been established and independent claim 14 is not rendered obvious by the cited combinations of Pavate, Woodward, IAM and Meisburger.

Claims 15-34 are allowable over the various cited combinations of Pavate, Meisburger, Woodward and IAM for at least the reason that they depend from allowable base claim 14.

Claims 35-39 and 59 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Pavate, Woodward, IAM and Dewey, U.S. Patent No. 3,674,926, or in the case of claim 37, over the combination of Pavate, Woodward and IAM in further view of Kitamura, U.S. Patent No. 5,477,049. Independent claim 35 recites providing a composition comprising at least one of Sb, Pb and Sn, selectively dissolving some components of the composition while leaving others undissolved, the undissolved components comprising at least two types, one type being darker than a background a second type being lighter than the background. Claim 35 further recites obtaining data about light scattering by undissolved components utilizing a microscope. None of the cited references, individually or as combined, disclose or suggest the claim 35 recited selectively dissolving components of a composition comprising at least one of Sb, Pb and Sn.

The Examiner indicates at page 9 of the present Action that because IAM discloses sputtering targets which can comprise Sb, Pb or Sn, it would be obvious to apply a

combination of Pavate, Woodward and Dewey because the targets are subject to the same quality control. The Examiner further states at page 12 of the present action that if "targets contained Sb, Pb or Sn instead of Al, that is what will be left as undissolved material. The solvents can be the same as disclosed by Pavate or slightly modified". None of these statements are supported by any of the references cited by the Examiner. The cited combinations of references do not provide a basis for a reasonable expectation of achieving the claim 35 recited selectively dissolving some components of a composition comprising at least one of Sb, Pb and Sn. Because the references fail to suggest each claim limitation, and because a basis for reasonable expectation of success has not been shown, a *prima facie* case of obviousness has not been established and independent claim 35 is not rendered obvious by the cited combinations of Pavate, Woodward, Dewey, IAM and Kitamura.

Dependent claims 36-39 and 59 are allowable over the cited combinations of Pavate, Woodward, Dewey, IAM and Kitamura for at least the reason that they depend from allowable base claim 35.

Claims 40-44 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Pavate, Meisburger, Woodward and Dewey. Independent claim 40 recites retaining impurities comprised by a composition, modifying the light absorbing property of at least some of the impurities, and obtaining data including relative darkness of impurities relative to a background defined by a substrate. The cited references, considered individually or as combined, fail to disclose or suggest the claim 40 recited modifying a light absorbing property of impurities retained on a substrate. The Examiner acknowledges at page 11 of the present Action that the combination of Pavate, Meisburger

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and Woodward do not disclose or suggest the recited modifying a light absorbing property of at least some of the impurities on the substrate. The Examiner indicates reliance on Dewey as changing light absorbing properties because Dewey discloses "feature counter with improved masking and grey level detection" referring to the abstract and column 1. Applicant notes that Dewey discloses selecting a grey level and further discloses counting features that appear darker or lighter than the selected grey level. This disclosure of grey level optimization does not disclose or suggest changing any light absorbing property of any impurity as recited in claim 40. Claim 40 is therefore not rendered obvious by the cited combination of Pavate, Meisburger, Woodward and Dewey.

Dependent claims 41-44 are allowable over the cited combination of Pavate, Meisburger, Woodward and Dewey for at least the reason that they depend from allowable base claim 40.

For the reasons discussed above, pending claims 14-44 and 59 are allowable. Accordingly, applicant respectfully requests formal allowance of such pending claims in the Examiner's next action.

Respectfully submitted,

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